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August 31, 1962

MEMORANDUM FOR THE FILES

FROM: ACDA/ST - F. A. Long

SUBJECT: Technical Aspects of the Problem of Weapons in
Outer Space

A meeting at ACDA to consider the above problem was attended by the following people: Dr. Joseph Charyk, DOD; Mr. John Rubel, DOD; Dr. Herbert Scoville, CIA; [REDACTED] CIA; Mr. Les Brown, State/INR; [REDACTED] CIA; Mr. Spurgeon Keeny, White House; [REDACTED] CIA; Mr. Wheatham Gathright, ACDA; Dr. F. A. Long, ACDA.

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1. The group first considered the problem of the U. S. capabilities for detecting space launchings and for detecting satellites in orbit. This topic had previously been included in a briefing from CIA to ACDA and hence only reviewed briefly. The conclusions were:

a. There now exists good U.S. capability to detect launchings from Tyura Tan and Kapustin Yar. However, there exist within the Soviet Union other launching sites which are of a size to permit launching of space orbiting devices. Initial launchings from such sites could not be detected. But, if these new sites were to be associated with the kind of tracking network normally needed to monitor space launchings, the probabilities would be good for soon detecting launchings from a new site.

b. There is a high probability of detecting an orbiting satellite which passes over the United States, with a good probability that the detection will be made on the first pass over the U.S.


c. Plans are in almost a final state for substantial extension of the tracking stations available to accomplish the above.

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d. There are almost no current U.S. capabilities for determining the characteristics and functions of orbiting satellites. If such a space device has been followed from an early stage of its launching, there is then a reasonable probability of knowing about its weight. Similarly if there is a series of launchings of similar space devices with

 there is a good probability of getting some information about function. Finally, if there are several launchings of the same type there is a good probability of determining whether the particular type of orbiting object is suspicious. 25X1D0b

2. By May 1963 the Nike-Zeus installation at Kwajalein should be modified so as to have a capability to intercept and destroy satellites whose path takes them over Kwajalein. The limiting altitude will be something like 300 nautical miles and destruction will necessitate use of a nuclear warhead. There will not be much confidence in this capability unless the system is tested. Parenthetically there was discussion about a Nike Hercules destruction capability but this point was not resolved.

On further discussion of this topic, it was noted that there were possibilities of using such systems as Minuteman and Polaris for satellite destruction but that consideration of this has not gone beyond the early study stage. Use of these devices would in any event require very precise knowledge of the orbital characteristics.

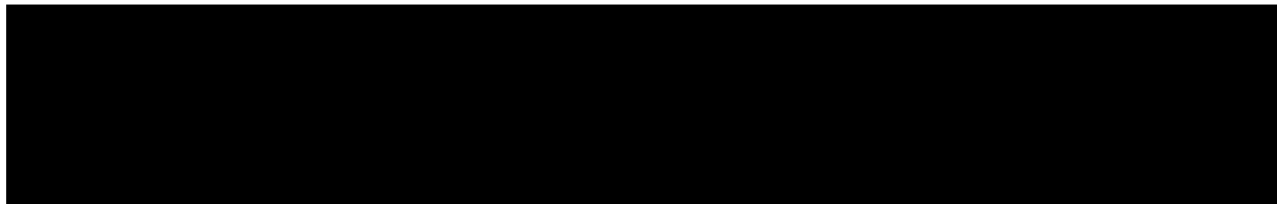
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4. The final topic considered was the present and future capabilities of USSR satellite systems for delivering nuclear weapons. Some consideration was given to characteristics and a Table relating to this is under preparation. Although it was noted that such warfare might have a substantial psychological impact, the assembled group saw no good military reasons for either the US or the USSR developing a satellite nuclear weapons system. Furthermore, there was no belief that this conclusion would change in the near future. The essential reason behind these conclusions is that ICBM systems appear to be both cheaper and more effective.

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